ABSTRACT

A vehicle safety device comprises a seat mounted within a passenger compartment of the vehicle, wherein the seat is movably connected to a vehicle frame by a seat position adjusting mechanism which allows the seat to move along an axis between a forward-most position and a rearward-most position. An air-bag is mounted within the passenger compartment in front of the forward-most position of the seat, with the forward-most position of the seat defined as a position of the seat in which a distance between a passenger seated in the seat and the air-bag is equal to a minimum safe clearance.

In addition, a method of maintaining a minimum safe clearance between an air-bag mounted in a vehicle and a vehicle passenger includes the steps of preventing motion of a seat toward the air-bag beyond a forward-most position wherein, when in the forward-most position, a passenger seated in the seat is separated from the air-bag by a predetermined minimum safe clearance and providing a position adjusting mechanism for at least one vehicle control pedal to allow a passenger seated in the seat to adjust a distance between the seat and the at least one pedal by moving the at least one pedal toward and away from the seat.

The invention also contemplates an automatic seat positioning system which takes into account both seat to air-bag distance and eye height and automatically, optimally positions a passenger to maximize safety and comfort.